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REISING, ETHINGTON, BARNES, KISSELLE, P.C. P. O. BOX 4390 TROY, MI 48099-4390			STEELE, JENNIFER A	
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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ROBERT C. LAM

Appeal 2010-000522
Application 10/678,720
Technology Center 1700

Decided: May 11, 2010

Before EDWARD C. KIMLIN, CHUNG K. PAK, and
PETER F. KRATZ, *Administrative Patent Judges*.

KIMLIN, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 6-9, 12, 13, and 29. We have jurisdiction over the appeal pursuant to 35 U.S.C. § 6. Claim 6 is illustrative:

6. A friction material comprising a fibrous base material impregnated with at least one curable resin, the fibrous base material comprising a porous primary layer and one secondary layer, the secondary layer comprising partially carbonized carbon fibers on at least one surface of the primary layer, the partially carbonized carbon fibers comprising 3% to about 90% of

the surface area of the primary layer, wherein the secondary layer comprises about 5% to about 35%, by weight, of partially carbonized carbon fibers, based on the weight of the fibrous base material, wherein the partially carbonized carbon fibers are 65 to 90% carbonized, and wherein the porous primary layer comprises a plurality of less fibrillated aramid fibers having a freeness of at least about 300 on the Canadian Standard Freeness (CSF) index, and optionally one or more of the following: cotton fibers, carbon fibers, carbon particles, and, at least one filler material.

The Examiner relies upon the following references as evidence of obviousness:

Smith	5,965,658	Oct. 12, 1999
Lam (EP '151)	EP 0971151	Jan. 12, 2000
Lam (EP '897)	EP 1 203 897 A1	Aug. 5, 2002

Appellant's claimed invention is directed to a friction material comprising a fibrous base which is impregnated with a curable resin. The fibrous base comprises a porous primary layer and a secondary layer. The primary layer comprises aramid fibers having the recited freeness and the secondary layer comprises partially carbonized carbon fibers. The primary layer may also contain carbon fibers.

Appealed claims 6-9, 12, 13, and 29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over EP '897 in view of EP '151 and Smith.

Appellant has not set forth an argument that is reasonably specific to any particular claim on appeal. Accordingly, all the appealed claims stand or fall together with claim 6.

We have thoroughly reviewed each of Appellant's arguments for patentability. However, we are in complete agreement with the Examiner's reasoned analysis and application of the prior art, as well as her cogent and though disposition of the arguments raised by Appellant. Accordingly, we

will adopt the Examiner's reasoning as our own in sustaining the rejection of record, and we add the following for emphasis only.

There is no dispute that EP '897, like Appellant, discloses a friction material comprising a fibrous base material that is impregnated with a curable resin wherein the fibrous base material comprises a porous primary layer and a secondary layer. Nor is there any dispute that the primary layer of EP '897 comprises less fibrillated aramid fibers and carbon fibers. As recognized by the Examiner, the secondary layer of EP '897 comprises carbon particles and aramid fibers but the reference does not teach that the secondary layer also comprises partially carbonized carbon fibers. However, Appellant does not contest the Examiner's finding that EP '151 teaches a friction material comprising a primary layer and a secondary layer wherein the secondary layer comprises high temperature resistant, high strength carbon fibers and aramid fibers, as well as a primary layer that comprises carbon fibers. Accordingly, based on the combined teachings of EP '897 and EP '151, we fully concur with the Examiner that it would have been obvious for one of ordinary skill in the art to include carbon fibers in the secondary layer of EP '897.

EP '897 and EP '151 do not teach that the carbon fibers are partially carbonized carbon fibers, as presently claimed. However, Smith teaches that carbon fibers and aramid fibers are preferred over asbestos in friction materials, and that carbonized carbon fibers are superior to carbon fibers in friction materials. As a result, we find no error in the Examiner's legal conclusion that it would have been obvious for one of ordinary skill in the art to use partially carbonized carbon fibers for the carbon fibers in the primary and secondary layers of EP '897 and EP '151. Appellant has made

no argument for why it would have been unobvious for one of ordinary skill in the art to use partially carbonized carbon fibers in the primary and secondary layers of EP '897 and EP '151.

We find no merit in Appellant's argument in that "given the infinite array of elements with which to start, one would not follow the exact route of the inventor" (App. Br. 7, 3rd ¶). Appellant has not explained why adding carbon fibers to the secondary layer of EP '897, and partially carbonizing such carbon fibers for the advantages taught by Smith, encompasses an infinite array of possible elements. As set forth by the Examiner, EP '897, EP '151, and Smith "are all in the same field of endeavor directed to producing a material for use as a brake which has the properties of creating friction while dissipating heat and maintaining strength and structural form in a high friction condition (Ans. 7, last ¶). Appellant's arguments, for the most part, constitute an ineffective attack of each of the references, individually, but fail to set forth a convincing rationale for why it would have been nonobvious for one of ordinary skill in the art to modify the friction material of EP '897 as proposed by the Examiner.

Appellant's Reply Brief contains arguments that could have been presented in the principal Brief, but were not. Accordingly, Appellant's new arguments are untimely and will not be considered in our disposition of this appeal. *See Optivus Tech., Inc. v. Ion Beam Applications, S.A.*, 469 F.3d 978, 989 (Fed. Cir. 2006) (Argument raised for the first time in the Reply Brief that could have been raised in the opening Brief is waived); *see also, Cross Med. Prods., Inc., v. Medtronic Sofamor Danek, Inc.*, 424 F.3d 1293, 1320-21 n.3 (Fed. Cir. 2005). *See also* 37 C.F.R. § 41.37(c)(1)(vii) (2007).

We do note, however, that Appellant cites paragraphs [0040], [0045]-[0050], [0053], [0055], [0056], and [0057] of EP' 151 in support of the argument that the reference teaches that the secondary layer does not comprise carbon fibers if the primary layer comprises carbon fibers. However, Appellant fails to cite paragraph [0042] of the reference which expressly discloses that primary and secondary layers may comprise carbon fibers. We also find no merit in Appellant's argument that paragraphs [0040] and [0044] of EP '151 disclose that carbon fibers are only useful in the secondary layer. The cited paragraphs provide no such teaching but only offer examples of fibers that may be present in the primary and secondary layers.

As a final point, we note that Appellant bases no argument upon objective evidence of nonobviousness, such as unexpected results.

In conclusion, based on the foregoing and the reasons well stated by the Examiner, the Examiner's decision rejecting the appealed claims is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

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